

A Primer on Inspections for SCMs in Metro Nashville



JUNE 4, 2015

Introductions



- **Primer Workshop Introductions**
 - Michael Hunt
MWS MS4 Program Manager
 - Rebecca Dohn
MWS Stormwater Environmental Compliance Officer
 - Anneli TerryNelson
MWS Stormwater Environmental Compliance Officer



Primer Workshop Outline



- 8:30 Primer Overview and Introductions
- 8:45 Terminology/Definitions
 - Regulatory Requirements
 - SCM Inspection Requirements
- 9:15 *10 min break*
- 9:25 SCM Practices
- 9:50 *5 min break*
- 9:55 Conducting Inspections
- 10:15 Questions/ Discussion / Field trip (on site)



Primer Workshop Purpose



- Stormwater Control Measure Qualified Professional Inspector requirement (upcoming TDEC/ UT Ext certification course)

- Better Inspections and Better Maintenance will:
 - ✦ Improve the success of stormwater infrastructure
 - ✦ Improve water quality
 - ✦ Keep Nashville beautiful
 - ✦ Increase community understanding of the function and benefit of green infrastructure



Inspection Requirements



○ Minimum requirements

- ✦ Review SWMM Vol 4 and Vol 5 Design chapters
- ✦ Review native vegetation commonly used in SCMs
- ✦ Ability to read maps and design plans
- ✦ Ability to walk a site
- ✦ (Special requirements for water quality units)
- ✦ KNOW where to get this information

CALL us at 880-2420 or email me at anneli.terrynelson@nashville.gov

www.nashville.gov/Water-Services/Developers/PostConstruction.aspx



Definitions and Terminology



EPA: Environmental Protection Agency

NPDES: National Pollutant Discharge Elimination System

MWS: Metro Water Services

MS4: Municipal Separate Storm Sewer System



Definitions and Terminology



PTP or SCM: Permanent Treatment Practice or Stormwater Control Measure (post construction practice to address stormwater on site)

GIP: Green Infrastructure Practice

O&M: Operation and Maintenance

I&M: Inspection and Maintenance

WQU: Water Quality Unit (underground stormwater filter system)





Regulatory Requirements



Regulatory Requirements



➤ Clean Water Act (1972 Amendments)

- National Pollution Discharge Elimination System (**NPDES**) was created in Section 402 of the Clean Water Act. Primarily focused on point-source discharges.
- **Set limits** on the effluent that can be introduced into a body of water from an operating and permitted facility.

➤ Clean Water Act (1987 Amendments)

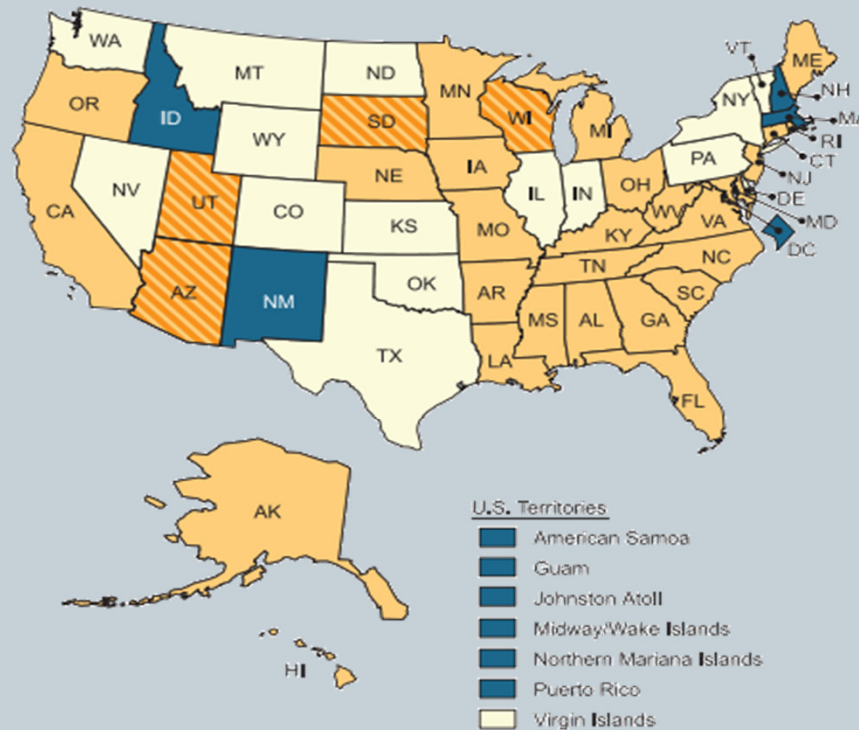
- Required stormwater discharge permits for activities associated with “Industrial” activities and Municipal Separate Storm Sewer Systems (MS4) with populations of 100,000 or more.



Regulatory Requirements

EPA Delegated Authority to Most States

State NPDES Program Authority



Regulatory Oversight

When it comes to stormwater, there are various regulations/agencies involved.



Clean Water Act
EPA gives
authority to states



TDEC gives
authority to
municipality
through MS4
permit



Metro responsible for protecting clean water.
(Phase 1 “major” permittee= direct EPA review;
same for Memphis, Chattanooga, Knoxville)

- Watershed Management
- MS4 Permit Compliance
- Grading Permit Oversight



Regulatory Requirements

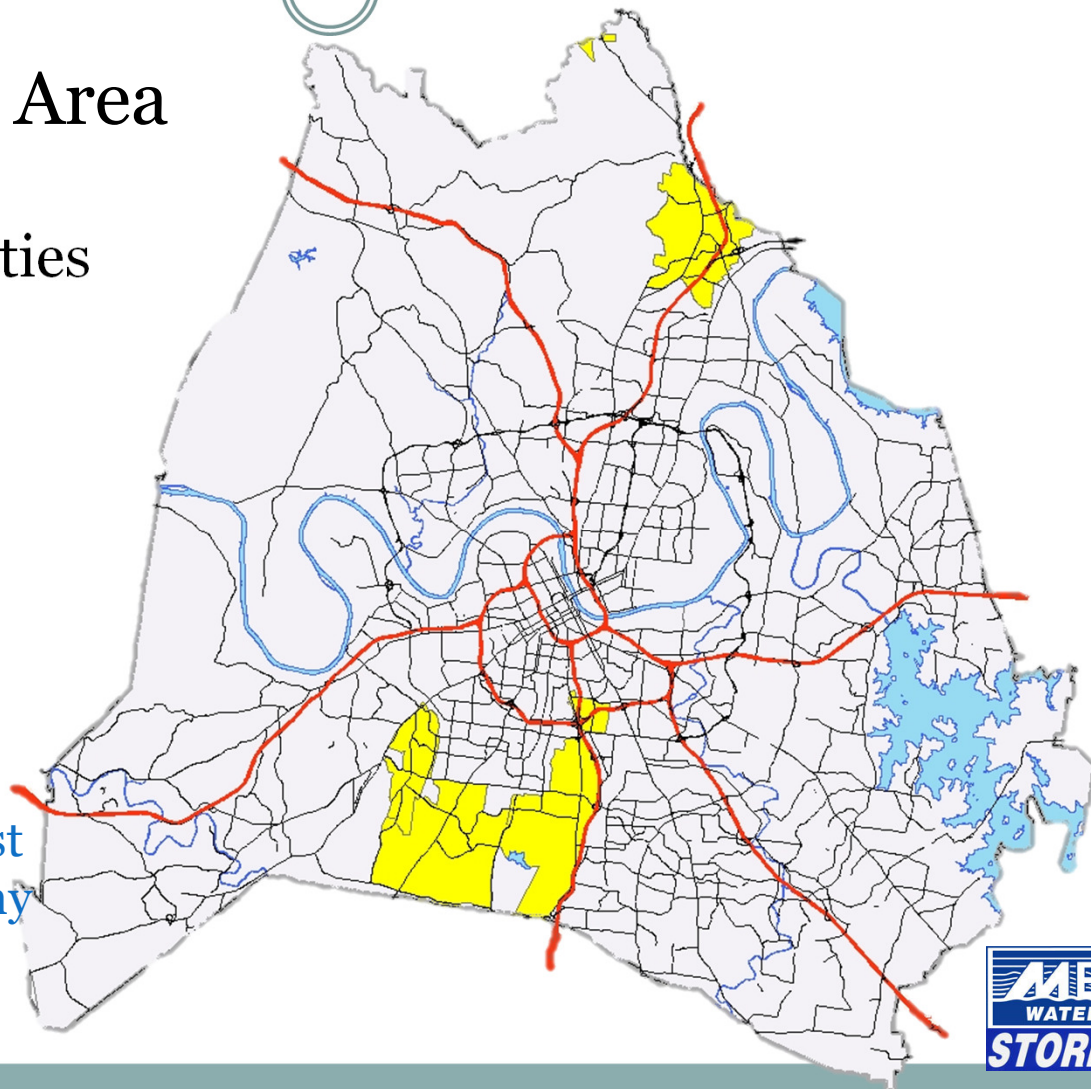
Nashville's MS4 Area

525 sq mi

-28 sq mi satellite cities
(yellow)

497 sq mi

- Average 500 active grading permits sites at any point in time
- Over 2400 sites with post construction SCMs (many with multiple SCMs)



Regulatory Requirements

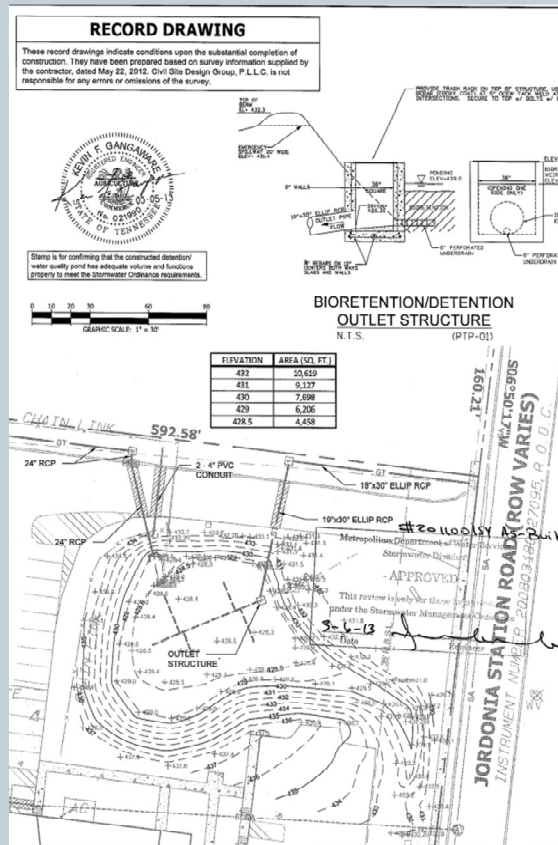


- **Illicit Discharge ordinance**
 - Only rain down the storm drain...
 - Penalties as part of enforcement
 - Comes into play if an unmaintained SCM fails and exports sediment
- **Stormwater Management Manual (SWMM)**
 - Provides framework for SCMs, including design specs, I&M requirements
- **GP process**
 - How SCMs come about...




SCMs must be installed for:

- New Development & Significant Redevelopment
- Stormwater pretreatment to remove sediment (i.e. pollution)



Maintenance Documents

 Metropolitan Nashville - Davidson County
Stormwater Management Manual
Volume 1 - Regulations

Davidson County ESMT
Recvd: 08/19/11 13:32
Fees: 62.00 Taxes: 0.00
20110819-0064346
12 pgs

November 2006

INSPECTION AND MAINTENANCE AGREEMENT
FOR PRIVATE STORMWATER MANAGEMENT FACILITIES

Grading Permit No.: [REDACTED] Map & Parcel No.: [REDACTED]

Project Name & Address: [REDACTED]

THIS AGREEMENT, made this 11 day of May, 2011, by and between [REDACTED], hereinafter referred to as the "OWNER(S)" of the following property and Metropolitan Government of Nashville and Davidson County, Tennessee, hereinafter referred to as the "METROPOLITAN GOVERNMENT",

WITNESSETH
WE, the OWNER(S), with full authority to execute deeds, mortgages, other covenants, do hereby covenant with the METROPOLITAN GOVERNMENT and agree as follows:

1. The OWNER(S) covenant and agree with the METROPOLITAN GOVERNMENT that the OWNER(S) shall provide for adequate long term maintenance and continuation of the stormwater control measures described in the Long Term Maintenance Plan and shown in the location map, deed of easement drawing or plat attached hereto to ensure that the facilities, are and remain in proper working condition in accordance with approved design standards, rules and regulations, and applicable laws. The OWNER(S) shall perform preventative maintenance activities at intervals described in the inspection schedule included in the Long Term Maintenance Plan along with necessary landscaping (grass cutting, etc.) and trash removal as part of regular maintenance.
2. The OWNER(S) shall submit to the METROPOLITAN GOVERNMENT an annual report by July 1st of each year. The report shall include the Long Term Maintenance Plan that documents the inspection schedule, times of inspection, remedial actions taken to repair, modify or reconstruct the system, the state of control measures, and notification of any planned change in responsibility for the system.
3. The OWNER(S) shall grant to the METROPOLITAN GOVERNMENT or its agent or contractor the right of entry at reasonable times and in a reasonable manner for the purpose of inspecting, operating, installing, constructing, reconstructing, maintaining or repairing the facility.
4. The OWNER(S) shall grant to the METROPOLITAN GOVERNMENT the necessary easements and rights-of-way and maintain perpetual access from public rights-of-way to the facility for the METROPOLITAN GOVERNMENT or its agent and contractor.
5. If, upon inspection, the METROPOLITAN GOVERNMENT finds that OWNER(S) has failed to properly maintain the facilities, the METROPOLITAN GOVERNMENT may order the work performed within ten (10) days. In the event the work is not performed within the specified time, the OWNER(S) agrees to allow the METROPOLITAN GOVERNMENT to enter the property and take whatever steps it deems necessary to maintain the stormwater control facilities. This provision shall not be construed to allow the METROPOLITAN GOVERNMENT to erect any structure of a permanent nature on the land of the OWNER(S) without first obtaining written approval of the OWNER(S).
6. The METROPOLITAN GOVERNMENT is under no obligation to maintain or repair said facilities, and in no event shall this Agreement be construed to impose any such obligation on the METROPOLITAN GOVERNMENT. The OWNER(S) shall reimburse the METROPOLITAN GOVERNMENT upon demand the costs incurred in the

- Submitted with Grading Permit Application
- Transfers with property (property deed)
- Includes Inspection and Maintenance Agreement, Declaration of Restrictions and Covenants, or old school Detention Agreements
- Long-term Maintenance Plan
 - Maintenance Agreement
 - SCM & Easement location map
 - Description of SCM components & inspection requirements
 - Inspection frequency
 - Reporting requirements



SCM Reporting Requirements



- Depends on the year the grading permit was issued.

Pre-2000

Water quantity only, complaint-driven

2000 - 2007:

No annual report required

Late 2007 – 2014:

Owners required to submit annual report

2014 – onwards:

**All SCMs require inspection by a
“Qualified Professional” every 5 yrs**

- Metro does inspections, too.



Primer SCM Inspection Goals



- Make observations
- Record observations by filling out inspection forms
- Take photographs
- Submit findings to Owner/ Responsible Party and Metro NPDES

Owner is ultimately responsible to make sure MWS receives the inspection report by the reporting deadline.

- Reference the SWMM and related stormwater regulations as needed



Primer SCM Inspection Goals



An inspection is **NOT** intended to:

- Diagnose the problem beyond identifying it as routine or remedial
- Perform Maintenance
- Recommend modifications to the SCM

The role of the SCM Inspector is to observe and document the condition of the SCM and report back to the owner.



SCM Inspector Responsibilities



An inspection is a documentation of observations.

It's okay to turn in an inspection report that reports maintenance needs. Metro follows up with the owner.





Questions/ Comments (10 minute break)

